
Engaging Fishermen Community in conservation of endangered species by rewarding the releasing effort

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Abstract

Catches non-target organisms or in other words 'bycatch'—an issue of critical ocean conservation and resource management concerns. numerous strategies exist to prevent bycatch. These were adopted by regional fisheries management bodies and by the countries on individual basis. However, the data have been lacking on the global scale of this issue in order to evaluate and to mitigate the impact. Releasing of bycatches is rarely practiced and reported by the fishermen. However, encouraging and acquiring the support of fishing community is important in the implementation process of this types of measures. In this concerns Sri Lanka adopted a simple yet successful methods to encourage skippers and crew members on releasing sharks, turtles and marine mammals and reporting the same. Here skippers are required to record a video via the electronic log tablets or smartphones on live releasing of above species and to provide the same to DFAR soon after they landed. As a reward DFAR provides a specially designed T-shirt to the skipper and crew members. Responses from the fishermen are positive and accordingly 222 number of videos received to DFAR by Skippers for the year 2022.

Keywords; Bycatch, Live release, community participation, Data, Reporting

1.0 Introduction

Catches non-target organisms or in other words 'bycatch'—an issue of critical ocean conservation and resource management concerns and this is considered as one of the most urgent threats to the world's remaining fish stocks is commercial fishing (DAVIES RWD, et al., 2009). Bycatch can negatively affect species such as dolphins, sea turtles, protected fish, and whales by harming animals, contributing to population declines, and impeding population recovery. Other impacts of fisheries on marine mammals may include removal of their preferred prey and sometimes habitat damage. Accordingly, numerous strategies exist to prevent bycatch. These were adopted by regional fisheries management bodies and by the countries on individual basis. However, the data have been lacking on the global scale of this issue in order to evaluate and to mitigate the impact. Specially the live releasing of bycatches is rarely practiced and reported by the fishermen. However, encouraging and acquiring the support of fishing community is important in the implementation process of this types of measures which requires certain amount of care and positive attitudes by the operators of the gears specially on live releasing. Fishermen are encouraged on releasing the by catches and to report the same as a measure to reduce the impact of the issue of bycatch. As an example, IOTC Resolutions 12/09 and 13/06 prohibit the retention of any part of thresher and oceanic whitetip sharks, aiming to promote the release of those species and to support conservation. IOTC Resolution 15/02 on seabirds and marine turtles, IOTC Resolution 17/05 and 13/05, 13/06 on sharks, 12/04 on turtles and 13/04 on marine mammals highlight the importance of providing the data by CPCs on bycatch and bycatch reclasses. Bycatches of species subjected to the conservation such as sharks, turtles and mammals (dolphins and whales) reported over the years by the fishermen. Most of these instances were reported by the logbooks.

Good species identification skills among crew and observers are important for data quality and the enforcement of conservation measures. They also enable the use of appropriate safe handling and release procedures. Skippers of Sri Lankan fishing fleet is educated on this during the special training which is compulsory for skipper licenses. Equipment such as line cutters and de-hookers are also in practice among

the multiday fishermen. However, it was identified that encouraging the skippers and the crew members on catch releasing is needed not only to increase the level of practice but also to improve providing the data on the same.

2.0 Methodology

In this concerns Department of Fisheries and aquatic Resources (DFAR) of Sri Lanka with the support of Pelagokos Pvt Ltd adopted a simple yet successful methods to encourage skippers and crew members on releasing sharks, turtles and marine mammals and reporting the same. Here skippers are required to record a video via the electronic log tablets or smartphones on live releasing of above species and to provide the same to DFAR soon after they landed. As a reward DFAR provides a specially designed T-shirt to the skipper and crew members. The design of the T-shirt is given below.



Figure 01: The T-shirt Design



Figure 02: Some of the Skippers who received the T-shirts by DFAR staff

These T-shirts are available in both of the local languages (Sinhala and Tamil) and are made of martial suite for marine conditions so that the skippers can wear these on board as well.

The programme was initiated in three districts, Batticaloa, Trincomalee, Chilaw and Kalutara. Responses from the fishermen are positive and accordingly 222 number of videos received to DFAR by Skippers for the year 2022. These videos containing the lengthy and careful realise of sharks, turtles and mammals.

3.0 Results

Summary, of the live release details are given below.

Table 01: Number of Videos received

District	Relevant harbour/Harbours	Number of incidents reported
Batticaloa	Valachchnai	31
Trincomalee	Codbay	24
Chilaw	Negombo- Pitipana Dickowita	62
Kaluatara	Beruwala	105

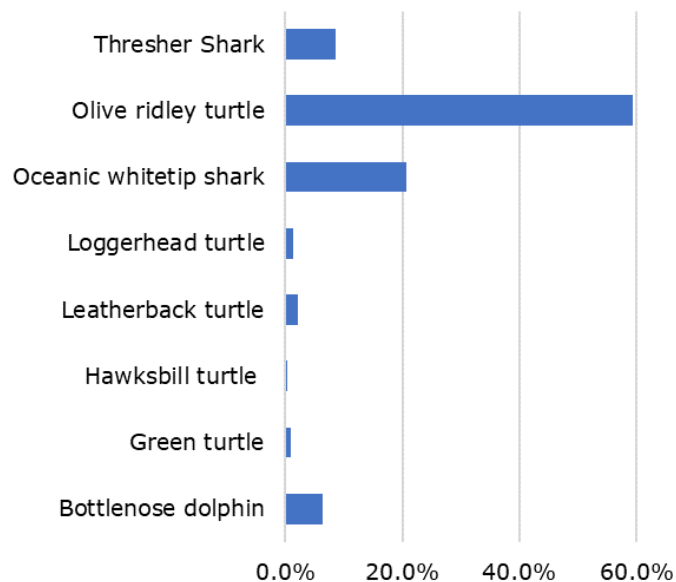
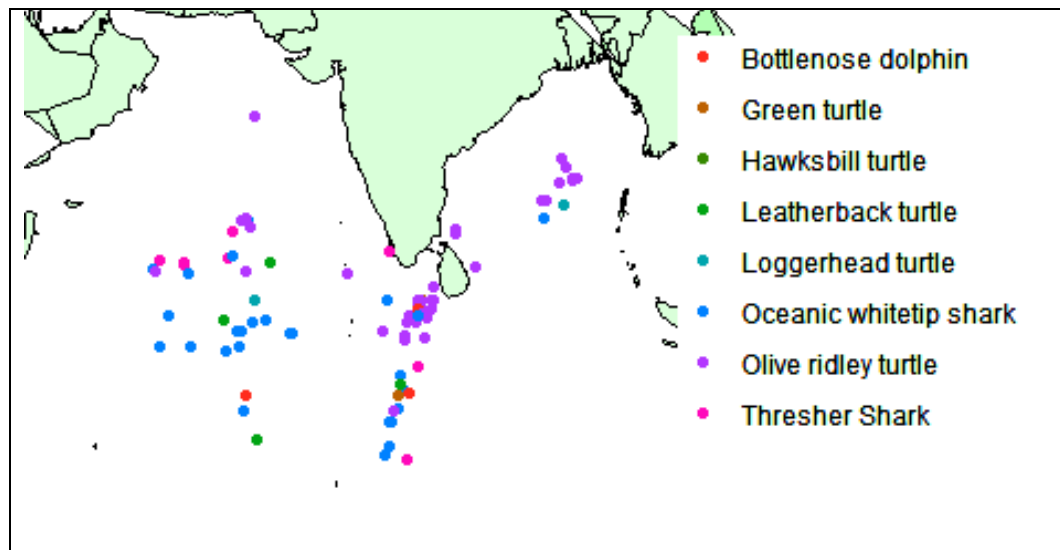


Figure 02: Species wise data for catch release information reported by Skippers

Table 02: Gear wise reports of catch release by the skippers

Species	Ring Nets	Gill nets	Long Lines	Total
Bottlenose dolphin		3	11	14
Green turtle		2		2
Hawksbill turtle	1			1
Leatherback turtle			5	5
Loggerhead turtle		1	2	3
Oceanic whitetip shark		4	42	46
Olive ridley turtle	11	59	62	132
Thresher Shark			19	19
Total	12	69	141	222

Some of the snapshots captured from the videos submitted by the skippers are given in Annex -I.

**Figure 03: The catch locations of the released specimens**

Details of the skippers who are frequently reporting and submitting the videos are published in a special page of the DFARs official web site (http://www.fisheriesdept.gov.lk/web/index.php?option=com_content&view=article&id=510&Itemid=318&lang=en). Some of the interesting videos on catch release submitted by the skippers are available in the official YouTube channel of DFAR (https://www.youtube.com/channel/UCpLoko4pNojS7FCINHL_AOA)

Conclusion

Results indicated that Olive ridley turtle and Oceanic whitetip shark are the species subjected to the greatest number of releases. Also skippers who operated the long line reported the highest number of by catches. Significant number of dolphins and treasure sharks were also subjected to release alive by the fishermen. The videos submitted are clear in quality and good enough to extract important scientific information. Provide T-shirts as a reward found to be a cost-effective solution to encourage fishermen on providing the data via videos. The recognition by DFAR seems encourage skippers on engaging the live catch release activities and reporting of the same frequently.

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Catch and Release Incentive Scheme Central Fisheries Board Website (<https://www.fisheriesireland.ie>)

Annex-I: Some of the snapshots captured from the videos submitted by the skippers







